

ANELEX 4000 PRINTER

Ideally designed for:

- Remote terminals
- Paper tape print station
- On-line for smaller computers





New Anelex 4000 Printer Is The Ideal Partner For Small Scale Computer Systems

INTRODUCTION

Anelex Corporation, the leading independent supplier of peripheral equipment, has developed a new, compact low speed printer to keep pace with modern schedules in computer usage and to satisfy the growing demand for almost immediate determination of facts and figures.

Engineered to meet the growing need for increased computer output, the new Anelex 4000 Printer is designed primarily to match the output capabilities of small scale data processing systems. These systems are used for the same applications as larger computers, but the volume of data for print-out is usually smaller. Because of this, the printer must be able to prepare the same reports on the same kinds of forms as high speed printers, but run slower and at less cost.

COMPUTER CONTROLLED TERMINAL SYSTEMS

The compact, economical adaptability of Anelex 4000 Printer systems combines dependable performance and DATA-PHONE interface capability for on-the-spot recording of data transmitted at a most economical rate for your particular communication requirements. Besides being readily adaptable to your computer installation, the new Anelex 4000

Printers are designed to accommodate any of the usual business forms and print single or multiple copies in a variety of form widths and lengths.

Anelex 4000 printer consoles can contain a print head, buffer, logic and a converter or controller. They can be provided to operate on-line or off-line, in-house or at a location remote from the data sources.

REMOTE COMMUNICATIONS SYSTEMS

The Anelex 4000 Printer is used on-line for fast print-out of messages transmitted over public and private communications facilities.

A NEW TECHNIQUE FOR LOW SPEED DATA PRINT-OUT

Basically the same type of rotating drum impact printer as the thoroughly proven Anelex high speed line printers, the new low speed printer uses the Anelex exclusive "penetration-controlled" hammers for high quality printing. The lower speed (300 lpm) and lower cost are achieved through a unique principle of operation which permits half the number of hammers as there are number of columns to print. The size of the printer has also been reduced to provide a compact console in keeping with smaller data processing systems.

The Anelex 4000 Printer is available either buffered or unbuffered.

PRINCIPLE OF OPERATION

All Anelex printers use the rotating drum impact method. A revolving drum, with type characters or symbols engraved around the periphery, presents the full font in the print position once during each revolution. An electromagnetically energized hammer drives the paper against the print drum through a ribbon to effect a printed impression. Anelex high speed printers have one hammer and one set of engraved characters for each column to be printed.

Anelex 4000 Printers are only slightly different. The print roll or drum is engraved in every other column. In operation, the printer prints every other column, then shifts the paper one column to the left or right and prints the remaining columns.

Printing occurs first in a print cycle for just the odd columns after which the forms are shifted left. A second print cycle then prints the even columns, thus completing one line of printed data. There is only one paper shift needed for each line. Should the first line print odd columns followed by even columns, the second line will be even columns followed by odd columns.

This technique allows a low speed printer to employ only half the electronics of a high speed printer and, as a result, achieve lower speed and lower cost.

The new Anelex low speed printer will print on standard edge-punched continuous fan-fold forms commonly used in most EDP applications.

THE DRUM SYSTEM

The print drum has a complete set of 64 characters

engraved around its periphery for every two columns to be printed. It rotates at speeds up to 750 rpm and has a 10 channel code wheel attached. The code wheel may be used to generate an 8 bit ASCII code. Two strobe channels permit identification of various code combinations to allow the printing of two character sets, i.e., FORTRAN/COBOL. Other arrangements may be provided within the scope of the 10 channel code wheel. The drum is mounted on a movable "Yoke" which opens for ease in loading forms and changing ribbon.

THE PAPER FEED SYSTEM

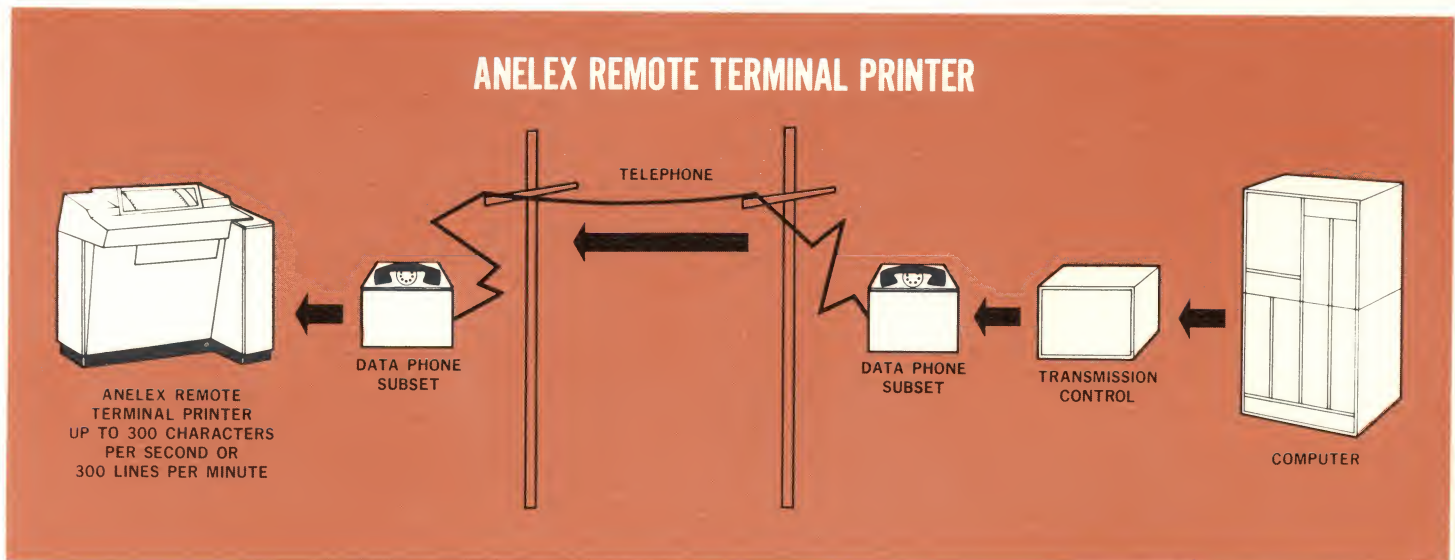
Paper forms are moved in the printer by and under the control of the paper feed system. This system consists of tractors, a shift mechanism, a drive mechanism, a vertical format unit and associated control electronics.

THE RIBBON FEED SYSTEM

The printer uses standard Anelex inked ribbons spanning all columns to be printed. The ribbons are wound on disposable mandrels for ease of replacement.

THE CONSOLE

The console houses the printer mechanism and its related electronics, including the buffer/controller when desired. The design is operator-oriented, permitting easy forms loading, ribbon and format loop changes. An experienced operator can change forms in one minute.



ANELEX 4000 PRINTER SPECIFICATIONS

PRINTER MECHANISM

Frame	aluminum castings
Rotating drum	2.962" diameter standard, 6.000" optional
Number of characters	64, or optional 128
Drum speed	750 rpm with 2.962" drum, 375 rpm with 6" drum
Code wheel	10 channel, identifies each character's printing position
Mounting	movable "Yoke" for easy paper loading and ribbon changing
Character font	"Open Gothic," special character sets available for custom applications
Paper feed system	tractor mechanisms with pins for use with continuous fan-fold forms. Electromechanical clutch and brake arrangements for advancing paper
Forms width	
maximum	20"
minimum	4"
Number of copies	1-6
Columns	to 160
Single line advance	18 ms
Slew rate	25"/sec.
Horizontal shift	left or right 0.1" activated by electromechanical shifter
Line spacing	6 lines per inch, 8 lines per inch optional
Vertical format control	closed loop tape moving synchronously with forms

Active channels	2, 8 or 12
Ribbon system	moves only when printing; automatic reversing; standard Anelex silk ribbon

CONSOLE

Height	48"
Width	42 1/2"
Depth	29"
Shipping weight	1000 lbs.
Power required	1.6KVA
The printer will operate on one of the following:	
115V $\pm$ 10%, 60 cps $\pm$ 1 cps	— single phase
208V $\pm$ 10%, 60 cps $\pm$ 1 cps	— three phase (four wire)
230V $\pm$ 10%, 60 cps $\pm$ 1 cps	— single phase (three wire)
230V $\pm$ 10%, 50 cps $\pm$ 1 cps	— single phase
Power supplies	
Hammer drive	—36V
Logic and control circuits	—6V, +6V, —18V regulated multiple voltage
Typical control panel (switches)	power-ON, OFF, START, STOP, TOP OF PAGE SLEWING; meets requirements of buffer/controller
Interlock switches	YOKE OPEN, SEQUENCER NOT READY, PAPER OUT and PAPER BREAK
Hammer drive	"one-shot" type standard; "flip-flop" types optional

Interface Details (See Block Diagram)

All connections between the printer electronics and the external buffer/controller are quick connector type.

All signals sent to the interface must conform to the input requirements for Standard Interface Signals. (Notice must be taken of the number of unit loads each circuit represents.)

Output signals are of two types and will drive 25 feet of twisted pair cable.

Standard Signals

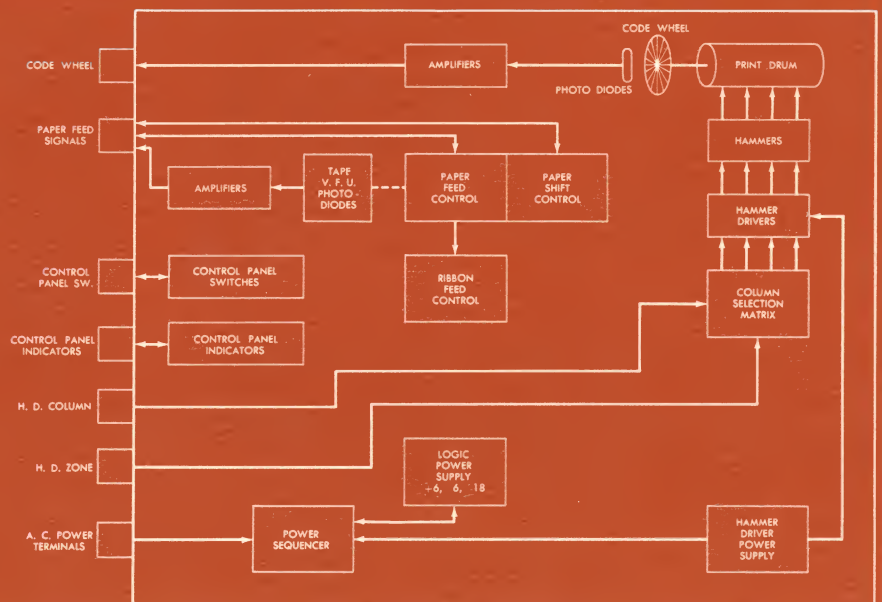
All circuits are triggered by logical "0's," e.g., a hammer driver will fire when both inputs are —3V.

Input Requirements

Logic "1" = 0.0V $\pm$ 0.5V (DC)

Logic "0" = —3V $\pm$ 0

—3.0V (DC)



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